

Review of Fisher Draft Species Report and Proposed Listing Rule

Thank you for providing the opportunity to review the draft species report and the proposed listing rule. I found the species report to be a thorough compilation of available information that was clearly presented. Variability in source data sets was accounted for throughout the report and resultant uncertainties relative to potential effects on fisher populations were stated. I found the transfer of information from the report to the proposed rule appropriately done.

Species Report

I found the sections on Taxonomy, Life History, Spacing Patterns and Movement, Habitat Associations, and Distribution and Abundance to be very well done. There are instances (noted below) where Dr. Jeffrey Lewis's dissertation may be helpful in providing additional information (Lewis, J.C. 2014. Post-release movements, survival and resource selection of fishers (*Pekania pennanti*) translocated to the Olympic Peninsula of Washington. Ph.D. dissertation, University of Washington, Seattle. 122pp.).

Life history (pp.9-19)

Lewis has information from the fisher ONP reintroduction project that could augment the sections on fisher life history, particularly survivorship, home range establishment and size, movements, habitat associations, and habitat models.

Stressors related to disease or predation (115-119)

Lewis's dissertation (above) has information on causes of death that may augment Tables 20 and 21.

Collision with vehicles (pp. 147-148)

Although 11 deaths due to vehicle collisions on the Olympic Peninsula were mentioned (Lewis, pers. comm.), it was not clear whether these data were included in calculations given in Table 22. Given the small number of fishers in the ONP study, the severity seems higher there than reported for other areas.

Review of Stressors

Scope of the stressor (p 51)

It is not obvious how this example yields a 95% scope until one gets to page 166. Please modify the earlier example to clarify the general approach.

I found the sections on habitat alteration resulting from past forest management and fire to be well done. Using the spotted owl habitat models is also a reasonable proxy for the fisher, and the shortcomings of the approach were well described. So we have estimates of habitat loss resulting from these disturbance factors, but little sense of future habitat recruitment as admitted on page 55. I appreciate the uncertainties of estimating habitat recruitment and do not expect concrete estimates, but it seems to me that additional insight into the process and timing of expected recruitment would be worthwhile. I expect there is a qualitative difference

in the rates of habitat recruitment with respect to land ownership. Loss and recruitment of habitat may be described in terms of yearly averages (a quasi-steady state) on non-federal lands. On federal lands, however, losses may be accounted for similarly, but recruitment ought to be more of a stepwise or threshold occurrence in time. With a much lower rate of disturbance due to forest management on federal lands since the mid-1990s, forest age-classes will transition somewhat simultaneously into more complex and suitable fisher habitat. Isn't there a way of indicating (at perhaps a decadal basis) when transitions to intermediate and high-quality fisher (admittedly spotted owl) habitat might be expected? Might "within the next few decades" (p.95) fall within the 40-year planning horizon (p. 110)?

Climate Change

Recognizing the inherent variation characteristic of climate change projections, the report does a good job of summarizing the possible effects on fisher habitat.

I found the extensive review sections on federal, state, tribal, and private regulations for fisher and its habitat to be well done. The evaluations for efficacy of the regulations for fisher populations and habitat were appropriate.

The section on Exposure to Toxicants is also very well done. It may be helpful to provide a numerical example for the rationale used in calculating mortality rate within the scope (p. 168).

Cumulative and Synergistic Effects

While cumulative effects have been documented very well in the species report and their likely influences on fisher populations described, not much more than a listing of the more obvious synergistic effects is possible (pp. 170-171). The magnitude of synergistic impacts on fisher populations requires far more detailed work than existing studies offer. Also, some synergistic effects may have positive effects on fisher populations such as the possibility of increasingly suitable climate for fishers in western Washington (p. 150).

The summary tables for stressors (pp.173-188) were very helpful.

Proposed Rule

Information Requested (pp. 60420-60422)

The information requested was clearly stated and appropriate.

Distinct Population Segment Analysis (pp. 60423-60424)

Given the USFS DPS policy, the conclusions regarding the discreteness and significance of this population segment appear valid.

Summaries of the Draft Species Report (pp. 60427-60435)

The summaries clearly and adequately portray the information in the Draft Species Report.

Other DPS Alternatives (pp. 60438-60441)

Considering the two alternative DPSs, I note that both would engender little assistance to the recovery of fishers in most of Oregon and all of Washington. Given that substantial intermediate and high quality habitat exists in these regions on federal lands and will improve markedly under a low forest disturbance regime, an effort to recover the fisher in these portions of the species range seems warranted. With acceptance of either DPS alternative, the gap between extant populations in Oregon and California and the Canadian populations would remain at some 994 miles. Given that isolation and small population sizes are strong concerns for the continued existence of these populations, it seems prudent to pursue the proposed DPS rather than either of the alternatives. Also, when considering the threats due to climate change and wildfire, recovery in northern Oregon and western Washington where these threats are considerably lower, may prove an easier task than in regions farther south. Of the two alternatives I find alternative 1 the better choice because it would promote connectivity between the northern and southern Sierra populations, whereas alternative 2 would not.